PLECS WORKSHOP

Real-Time Simulation Using the PLECS RT Box
Plexim GmbH, 05.11.2024

08:30	**Registration and Installation of Necessary Features**
09:00	**Overview and Introduction to RT Box Workflow using PLECS** ▶ PLECS overview ▶ Ideal switch concept ▶ From PLECS offline models to RCP and HIL ▶ Code Generation
09:30	**RT Box Introductory Exercise** ▶ PLECS RT Box features Exercise: Introductory exercise using I/O ports
10:30	**RT Box Library Overview**
10:45	**Break**
11:00	**Real-time Simulation of a Voltage Source Inverter (VSI)** ▶ PLECS model creation using the target blocks library ▶ Deployment on the RT Box Exercise: Voltage Source Inverter (VSI)
12:00	**Lunch**
13:00	**Timing Overview and Step Size Selection** ▶ RT Box timing scheme ▶ Step size and calculation time ▶ Motivation for sub-cycle averaging using PWM capture module Exercise: Timing and Step Size Selection
14:30	**Model Optimization** ▶ Sub-cycle averaging and power modules ▶ Model separation Exercise: Model splitting of a DTC example
15:00	**Break**
15:15	**Virtual Prototyping** ▶ Concept of virtual prototyping ▶ Extension of VSI with controls Exercise: Virtual prototyping of a VSI
16:15	**RT Box Hardware-in-the-Loop (HIL) Application Demo, Q&A**
17:00	**End of Workshop**
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Location	Plexim GmbH, 3rd Floor, Zeppelin Wing, Technoparkstrasse 1, 8005 Zurich, Switzerland
Note	This workshop addresses to anyone who already has experience with the simulation software PLECS.

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